

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1. (Currently amended) A method for promoting the survival, ~~growth, proliferation, or~~ maintenance of mammalian motoneurons comprising administering to the motoneurons an effective amount of a purified polypeptide comprising an amino acid sequence ~~that is at least 80% identical to as set forth in SEQ ID NO:4.~~

Claims 2-4. (Canceled)

Claim 5. (Original) The method of claim 1, wherein the polypeptide is 100% identical to SEQ ID NO:4.

Claim 6. (Currently amended) The method of claim 1, wherein the method further comprises promoting regeneration of the axon of a motoneuron.

Claim 7. (Currently amended) The method of claim 1, wherein the method comprises promoting the survival, ~~growth, proliferation,~~ or maintenance of neurons *in vitro*.

Claim 8. (Withdrawn) The method of claim 1, wherein the method comprises promoting the survival, growth, proliferation, or maintenance of isolated spinal motoneurons *in vitro*.

Claim 9. (Currently amended) The method of claim 1, wherein the method comprises administering the polypeptide to non-neuronal cells or tissues sufficiently proximal to neurons such that the polypeptide is effective at promoting the survival, ~~growth, proliferation,~~ or maintenance of mammalian neurons.

Claim 10. (Canceled)

Claim 11. (Withdrawn) The method of claim 1, wherein the method comprises promoting the regeneration of nerve fibers in a severed or injured spinal cord of a mammal.

Claim 12. (Currently amended) The method of claim 1, wherein the method further comprises promoting the ~~regeneration of peripheral nerves~~ the reinnervation of a target muscle of motoneurons in a mammal.

Claim 13. (Currently amended) The method of claim 4 6, wherein the method comprises promoting the axonal regeneration of axotomized motoneurons in a mammal.

Claim 14. (Canceled)

Claim 15. (Currently amended) The method of claim 1, wherein the method comprises administering the polypeptide in a suitable carrier to a mammal for treatment of a ~~medical condition selected from the group consisting of:~~ peripheral nerve injury injuries, musculoskeletal disorders, spinal cord injuries, head injuries, strokes, neuromuscular degenerative diseases, amyotrophic lateral sclerosis, spinal muscular atrophy, peripheral neuropathy, inhibition of scar formation, diabetic peripheral neuropathy, peripheral neuropathy resulting from AIDS, peripheral neuropathy resulting from radiation treatment for cancer, multiple sclerosis, muscular dystrophy, myasthenia gravis, and sensory neuronal function disorders.

Claim 16. (Canceled)

Claim 17. (Withdrawn) A method for promoting the survival, growth, proliferation, or maintenance of mammalian neurons comprising administering to the neurons an effective amount of a purified polypeptide comprising an amino acid sequence that is at least 80% identical to SEQ ID NO:3.

Claim 18. (Withdrawn) The method of claim 17, wherein the polypeptide is at least 85% identical to SEQ ID NO:3.

Claim 19. (Withdrawn) The method of claim 17, wherein the polypeptide is at least 90% identical to SEQ ID NO:3.

Claim 20. (Withdrawn) The method of claim 17, wherein the polypeptide is at least 95% identical to SEQ ID NO:3.

Claim 21. (Withdrawn) The method of claim 17, wherein the polypeptide is 100% identical to SEQ ID NO:3.

Claim 22. (Withdrawn) The method of claim 17, wherein the method comprises promoting regeneration of the axon of a motoneuron.

Claim 23. (Withdrawn) The method of claim 17, wherein the method comprises promoting the survival, growth, proliferation, or maintenance of neurons *in vitro*.

Claim 24. (Withdrawn) The method of claim 17, wherein the method comprises promoting the survival and growth of isolated spinal motoneurons *in vitro*.

Claim 25. (Withdrawn) The method of claim 17, wherein the method comprises promoting the rescue and morphologically-complete neuronal regeneration of axotomized motoneurons *in vivo*.

Claim 26. (Withdrawn) The method of claim 17, wherein the method comprises promoting the regeneration of nerve fibers in a severed or injured spinal cord of a mammal.

Claim 27. (Withdrawn) The method of claim 17, wherein the method comprises promoting the regeneration of peripheral nerves in a mammal.

Claim 28. (Withdrawn) The method of claim 17, wherein the method comprises promoting the axonal regeneration of axotomized motoneurons in a mammal.

Claim 29. (Withdrawn) The method of claim 17, wherein the method comprises administering the polypeptide to non-neuronal cells or tissues sufficiently proximal to neurons such that the polypeptide is effective at promoting the survival, growth, proliferation, or maintenance of mammalian neurons.

Claim 30. (Withdrawn) The method of claim 17, wherein the method comprises inhibiting the effects of hereditary motoneuron disease in a mammal where muscles associated with the diseased motoneurons degenerate.

Claim 31. (Withdrawn) The method of claim 17, wherein the method comprises administering the polypeptide in a suitable carrier to a mammal for treatment of a medical condition selected from the group consisting of: peripheral nerve injuries, musculoskeletal disorders, spinal cord injuries, head injuries, strokes, neuromuscular degenerative diseases, amyotrophic lateral sclerosis, spinal muscular atrophy, peripheral neuropathy, inhibition of scar formation, diabetic peripheral neuropathy, peripheral neuropathy resulting from AIDS, peripheral neuropathy resulting from radiation treatment for cancer, multiple sclerosis, muscular dystrophy, myasthenia gravis, and sensory neuronal function disorders.

Claim 32. (Withdrawn) A method for promoting the survival, growth, proliferation, or maintenance of mammalian neurons comprising administering to the neurons an effective amount of a purified polypeptide, the sequence of which comprises SEQ ID NO:3, or SEQ ID NO:3 with one or more conservative amino acid substitution.

Claim 33. (Withdrawn) A method of promoting the differentiation of neural stem cells into neural cells comprising administering to the neural stem cells an effective amount of a purified polypeptide comprising an amino acid sequence that is at least 80% identical to SEQ ID NO:4 or SEQ ID NO:3.

Claim 34. (Withdrawn) The method of claim 31, wherein the method comprises administering the polypeptide to non-neuronal cells or tissues sufficiently proximal to neural stem cells or tissues sufficiently proximal to neural stem cells such that the polypeptide is effective at promoting the differentiation of the neural stem cells into neurons.

Claim 35. (New) A method for promoting axonal regeneration of an axotomized motoneuron, comprising administering to the motoneuron an effective amount of a purified polypeptide comprising an amino acid sequence as set forth in SEQ ID NO:4.

Claim 36. (New) The method of claim 35, wherein the method comprises administering the polypeptide to non-neuronal cells or tissues sufficiently proximal to the axotomized motoneuron such that the polypeptide is effective at promoting axonal regeneration of the axotomized motoneuron.

Claim 37. (New) A method for promoting the reinnervation of a target muscle of motoneurons, comprising administering to the motoneurons an effective amount of a purified polypeptide comprising an amino acid sequence as set forth in SEQ ID NO:4.

Claim 38. (New) The method of claim 37, wherein the method comprises administering the polypeptide to non-neuronal cells or target muscle tissues sufficiently proximal to the motoneurons such that the polypeptide is effective at promoting the reinnervation of the target muscle.